



Leveraging Funding Opportunities

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U.S. EPA, Region 9

California Energy Commission

Integrated Energy Policy Report Workshop

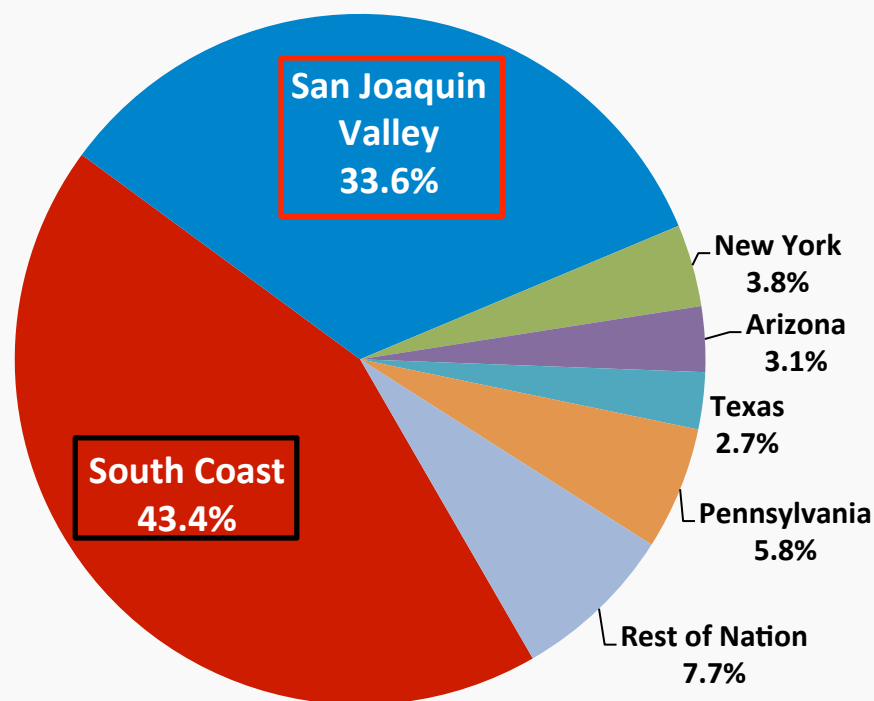
April 23, 2014

South Coast & San Joaquin Valley Exposure in Relation to the US

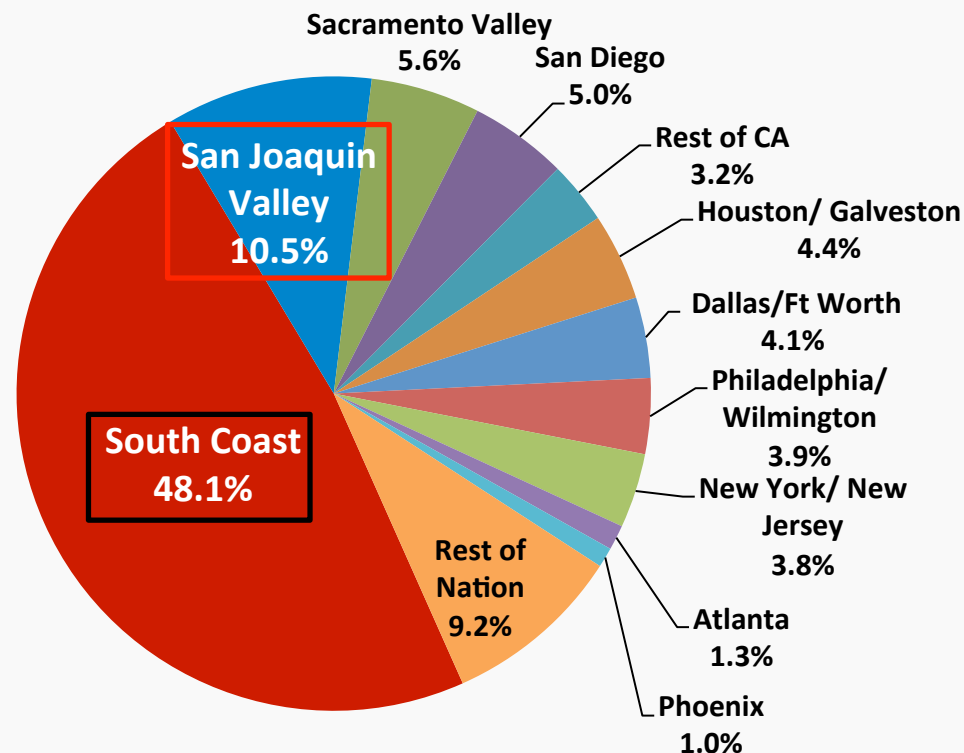


Nationwide, the majority of health impacts from PM_{2.5} & ozone exposure occur in the South Coast & San Joaquin Valley, CA.

PM_{2.5} Annual Average NAAQS
= 15 µg/m³



8-Hour Ozone NAAQS = 75 ppb



Population-weighted incremental exposure to: PM_{2.5} above the NAAQS annual standard based on 2007-2009 data and ozone above the 8-Hour NAAQS (> 75 ppb), based on 2008-2010 design values - Source: SCAQMD

EPA Projections Show 99% of U.S. Counties with Monitors Would Meet the Annual Fine Particle Health Standard of $12\text{ }\mu\text{g}/\text{m}^3$ in 2020



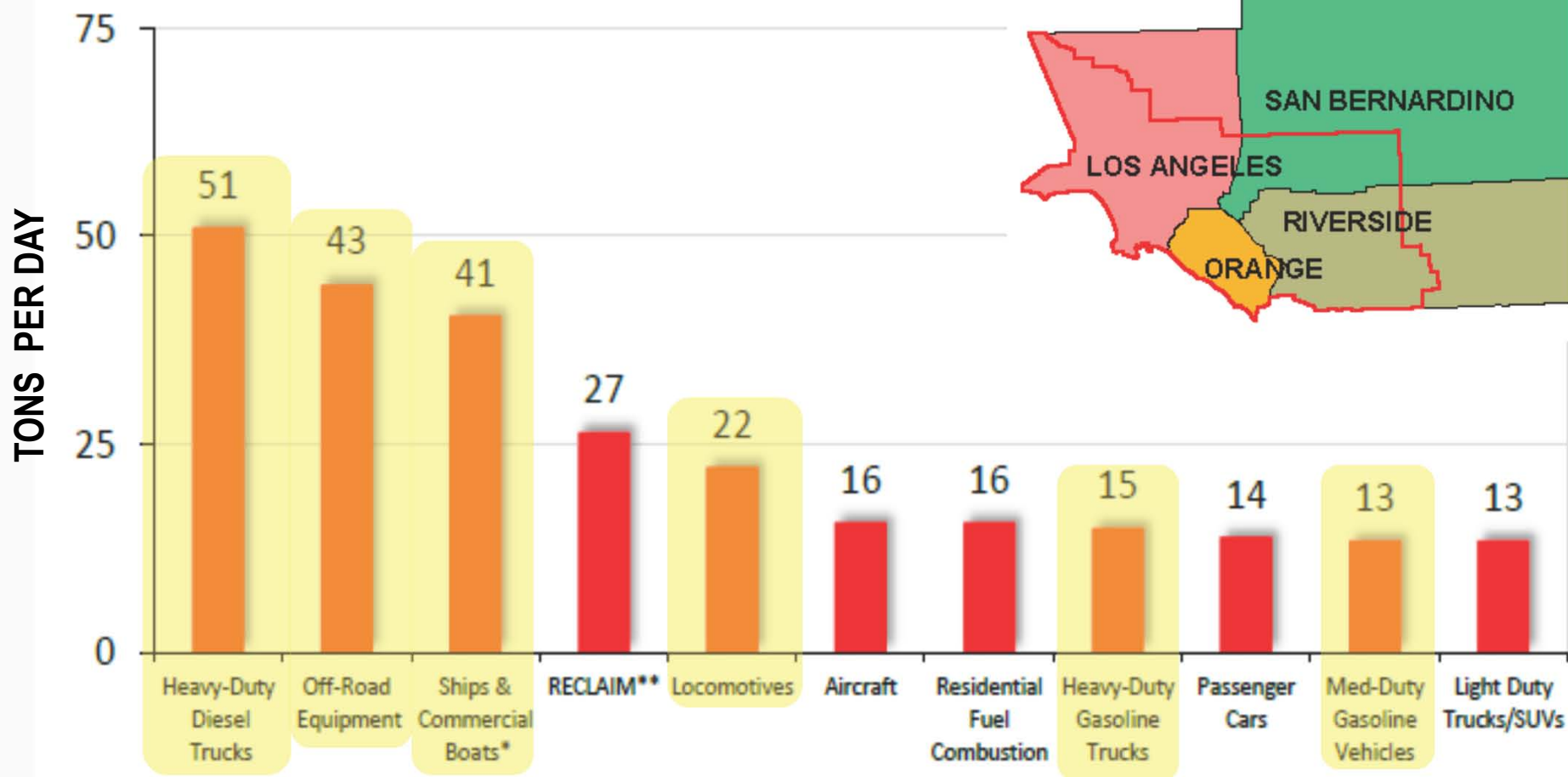
7 counties are projected not to meet $12.0\text{ }\mu\text{g}/\text{m}^3$ in 2020.

All of these are already under requirements to reduce $\text{PM}_{2.5}$.

South Coast NO_x Emissions (2023 estimates)

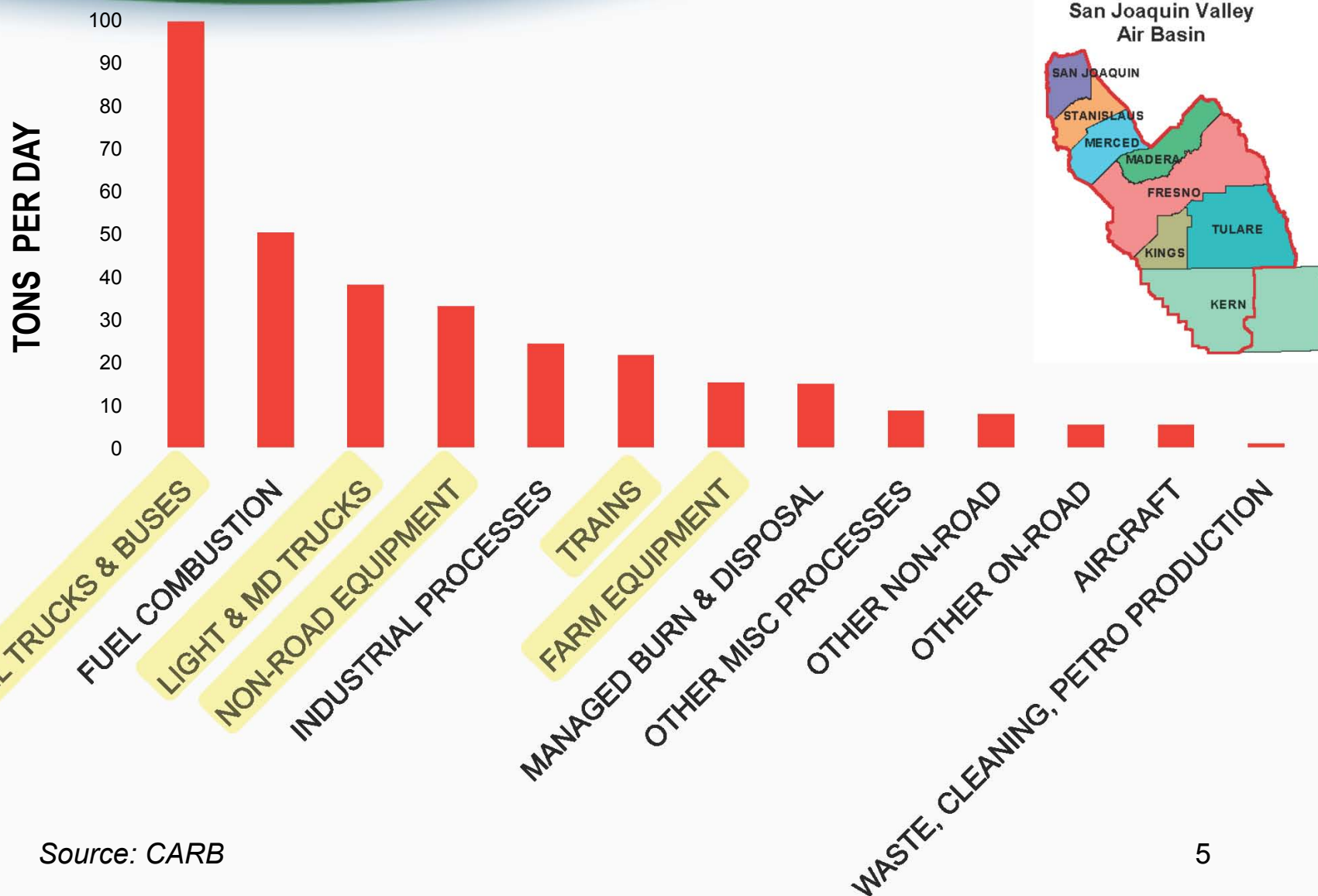


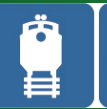
South Coast Air Basin



Source: SCAQMD

San Joaquin Valley NO_x Emissions (2020 estimates)

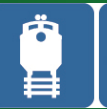




WEST COAST COLLABORATIVE
A public-private partnership to reduce diesel emissions



- Part of EPA National Clean Diesel Campaign (NCDC)
 - The West Coast Collaborative is a public-private partnership to reduce diesel and GHG emissions from MD and HD diesel engines, and advance clean air technologies and practices along the West Coast.
- Focused on low and zero emission MD/HD technology deployment
 - Policy: National Environmental Policy Act (NEPA) review, Supplemental Environmental Projects (SEPs), state & local in-use initiatives, etc.
 - Partnerships: DOE Clean Cities Coalitions, California High Efficiency & Advanced Truck Research Center, CA Natural Gas Vehicle Partnership, San Pedro Bay Ports Technology Advancement Program, CARB, Air Districts, other public, private, non-profit and academic partnerships
- Fund grant projects with the Diesel Emissions Reduction Act (DERA)
 - Funding assistance to retrofit, repower, or replace MD/HD engines/vehicles/equipment.
 - WCC DERA Funding FY13 = \$1.76M; FY14 ~ \$1.76M; DERA Port RFP FY13 = \$4M; DERA Rebate Program FY13 = \$2M
 - DERA funding authorization sunsets in 2016 without Congressional reauthorization (\geq \$100M/yr nationally).
 - *Uncertainty regarding DERA appropriations for FY15-16*



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- Types of emission reduction technologies funded through the West Coast Collaborative DERA program:
 - Diesel-powered repower rubber tire gantry cranes with hybrid electric RTG cranes
 - Replace heavy-duty trucks with latest model year trucks
 - Battery-electric, zero-emission, hybrid and natural gas delivery trucks
 - Agricultural water irrigation pump electrification
 - Cruise ship and cargo ship shorepower
 - Hybrid and natural gas school buses
 - Truck stop electrification
 - Diesel to natural gas truck replacements

Clean Air Technology Initiative (CATI)



- Established to focus investment in new technologies to combat the worst air quality in the U.S. in the South Coast and San Joaquin Valley.
- Reduce emissions from significant sources.
- Focused on EPA's health-based NAAQS.
- Tie advanced technologies to SIP development.
- Partner agencies include:



United States
Environmental Protection Agency



California
Air Resources Board



South Coast
Air Quality Management District



San Joaquin Valley
Air Pollution Control District



- Stakeholder Partnerships: CA Fuel Cell Partnership, CA Plug-in Electric Vehicle Collaborative, CA Environmental Dialogue, etc.

CATI Goals



- **Promote** activities that will result in significant emissions reductions to attain NAAQS by focusing on PM_{2.5} & NO_x in SJV & South Coast.
- **Target** significant emission sources, with GHGs as cobenefits.
- **Support** California state & local efforts through technology verification and deployment.
- **Showcase** technologies in the most heavily impacted communities.
- **Foster** local economic development.

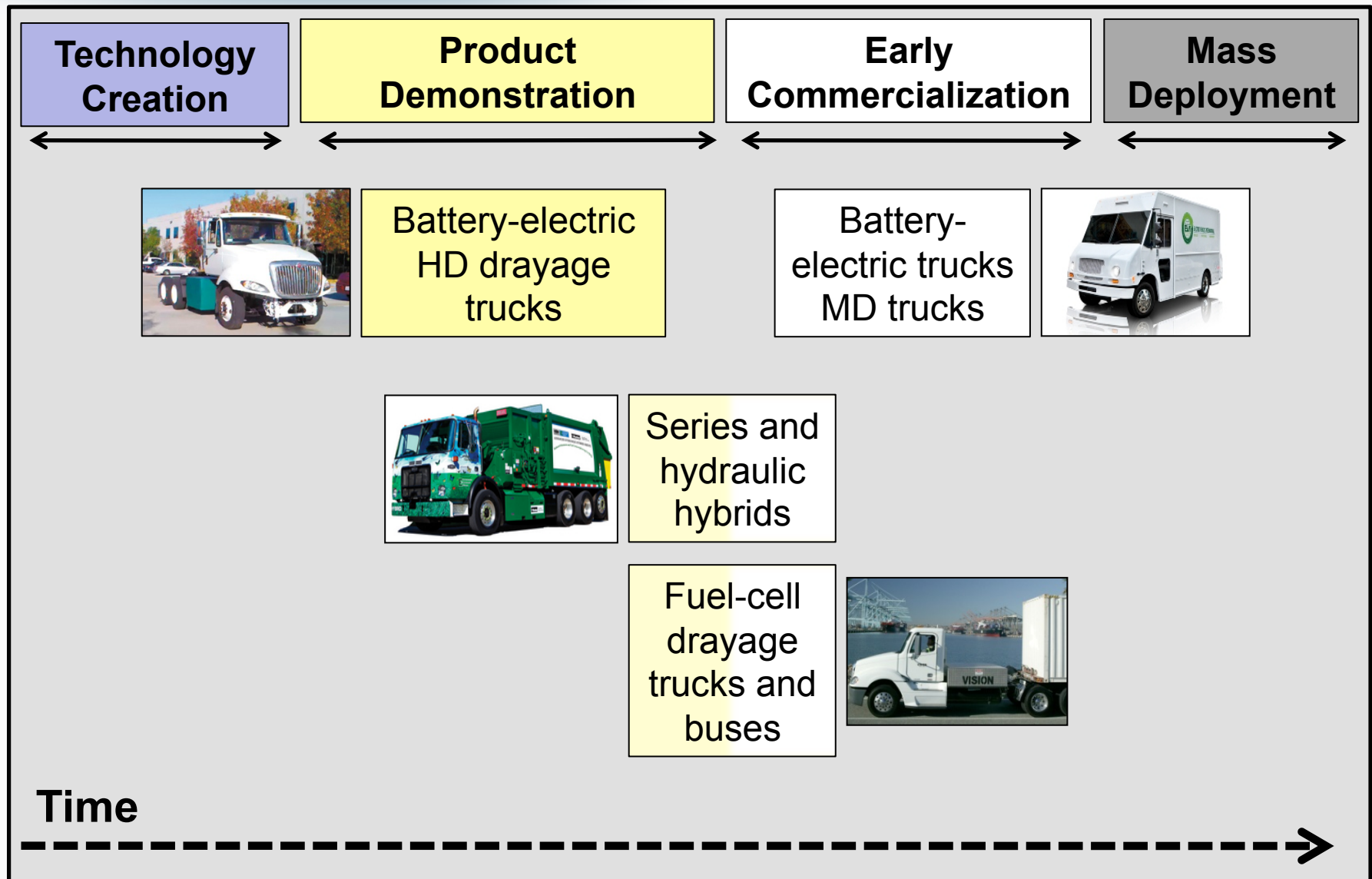
Focus of the Initiative



Demonstrating and accelerating the deployment of the cleanest technologies in the South Coast and San Joaquin Valley to meet NAAQS goals by:

- ❑ Determining targeted sectors
 - ❑ Identifying technology options for priority sources
 - ❑ Providing funding for technology testing and deployment
 - ❑ Identifying and pursuing policy options
 - ❑ Enhancing outreach and education

Example: CATI-Funded HDV Technologies



CATI-Funded HDV Technologies



- Types of emission reduction technologies funded through the Clean Air Technology Initiative:
 - SJVAPCD has received nearly \$3M from EPA Region 9, primarily to support the District's Technology Advancement Program (TAP), which works with technology vendors and equipment operators to demonstrate innovative mobile source, renewable energy and waste-to-energy technologies.
 - SCAQMD has received over \$3.7M from EPA Region 9 to support advanced low and zero emission technologies



- Areas of potential cross-agency funding collaboration
 - Coordinate timing and duration of RFP/funding solicitation releases with partner agencies
 - Focus funding on NAAQS nonattainment areas
 - Incorporate criteria air pollutant emission reduction metrics into RFPs/ RFAs/RFI/Bids/Solicitations
 - Support alt fueling/charging infrastructure for both public access and fleet applications
 - Support heavy-duty alternative fuel vehicle (AFV) technologies with a particular emphasis on replacement and repower projects
 - Prioritize projects that match/leverage federal funding assistance
 - Join our network of partners at www.westcoastcollaborative.org, and participate in our upcoming Partners Meeting in San Francisco (Sept. 4 – 5, 2014)



Thank you!

Penelope McDaniel

West Coast Collaborative

Clean Energy & Climate Change Office – Air Division

U.S. EPA, Region 9

www.westcoastcollaborative.org

www.epa.gov/region9/cleantech